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ABSTRACT

The accomplishments of the American psychologist Wayne Dennis (1905-1976), author of "Children of the Creche" and approximately 130 additional published works, are described. Professor Dennis' research interests and accomplishments are emphasized. (RH)

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Wayne Dennis: A Biographical and Professional Perspective 1905-1976

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The ability to develop and maintain a sensitive regard for relevant issues while pioneering innovative strategies across an extensive array of topics is unique among modern scientists. Throughout his productive career, Wayne Dennis exemplified these uncommon qualities in establishing himself as a prominent figure in psychology.

Wayne Dennis was born on September 1, 1905, in Washington County, Ohio. The son of Samuel R. and Mary V. (Fox) Dennis, his childhood was influenced by a semi-rural, midwestern environment. His father, a self-employed merchant, provided the family with moderate social affluence and financial security.

His academic prowess was established early. Following graduation with an A. B. degree from Marietta College in 1926, he pursued graduate study at Clark University, which was generally recognized at that time as the foremost center for child study in the United States. He received his A. M. and Ph. D. degrees in 1928 and 1930. Shortly after receiving his A. M. degree, he married Marsena Anne Galbreath on March 19, 1928. The marriage produced three children: Mary, Anne, and James Gill, and lasted 37 years until Mrs. Dennis' death in 1965. His second marriage, on March 18, 1970, was to Margaret Wallihan Hudson. His last complete published work, The

Intellectually Gifted: An Overview (1976) was co-edited with his wife.

Simultaneous with completing his doctoral requirements, Dennis began his academic career in 1929, as an Assistant Professor of Psychology at the University of Virginia. He remained there for 13 years, during which time he also served for one year (1937-1938) as a Visiting Professor at Clark University. He subsequently accepted full professorial duties at Louisiana State University in 1942 and served there as Department Head from 1944-1946. Following this, he was Department Head and Professor at the University of Pittsburgh from 1946-1951. From 1951 to 1970, he was the Chairman of the Department and Professor of Psychology at Brooklyn College. He founded, chaired, and was Executive Officer of the Doctoral Program in Psychology at the City University of New York from 1962 to 1964. Although he acted as a Visiting Professor of Psychology at the University of Beirut from 1955 to 1956, and 1958 to 1959, he also finished his active academic career there from 1974 to 1975. Intermediate responsibilities included Lieutenant, USNRF, 1943 to 1946, duties as Head, Human Engineering Section, Special Devices, Division of Naval Research, 1945 to 1946, as well as summer teaching experiences at Columbia, Washington State, University of California

(Berkeley), University of Houston, and San Francisco State University.

He held several professional affiliations and honors, some of which included: Fellow, American Psychological Association, Board of Directors, American Psychological Association (1951-1955), President, Division 1 (1955), President, Division 7 (1965), International Society of Psychology, Gerontology Society, Society for Research in Child Development, Member, Eastern Psychological Association, Phi Beta Kappa, and Sigma Chi. He also served as Editor, Psychological Bulletin, Member, Editorial Board, Journal of Genetic Psychology, and Member, Editorial Board, Journal of Experimental Child Psychology.

The most remarkable aspect of Dennis' professional career was the breadth of topics which he addressed. While his primary research efforts concentrated on child development issues, his wide-ranging empirical investigations could serve as a cornerstone for psychology in general. His published works cover topics including unlearned responses in neonates; the origin of the smile; processes involved in the development of racial stereotypes; the developmental course of creativity; science of psychology; perception; social psychology; comparative psychology; abnormal psychology; industrial psychology; psychopathology of childhood; the intellectually gifted; group values;

and psychology and public health. Further, this paper will provide an overview of additional topics with which Dennis was principally involved, namely, aging; animistic thinking; the history of child development; environmental experiences in child development; human figure drawings; infant behavior and development; animal learning/ mazes; current trends in psychology; and cross-cultural studies.

Dennis' earliest academic efforts investigated various perception, sensory, and methodological variables in animal learning, specifically elevated maze learning. Dennis (1929) conducted a study whcih hypothesized the sufficiency of proprioceptive impulses for successful maze performance in sensory deprived (blinded) rats. This study launched 18 subsequent investigations along similar lines. Dennis' empirical work was consistency atuned to topical issues. It is not surprising, then, to note that the majority of his maze learning studies were in close proximity to Tolman's definitive 1932 publication of Purposive Behavior in Animals and Men. Of particular importance was a study (Dennis, 1932) which was among the first to challenge Lashley's neural mechanism theory of maze learning. Also, it is interesting to note that in a continuation study (Dennis, 1931) he shifted his position, pointing out that exteroceptive, as well as proprioceptive stimuli, are needed to account for maze performance. This openness to alternate evidence was a distinctive hallmark of

Dennis' investigative style. Dennis published articles on animal learning from 1928 to 1955. It appears that his rigorous empirical attitude toward research was born out of his beginning experience in this area.

In addition to his ability to confront popularized topics of interest, Dennis was sensitive to novel and innovative notions. In 1938, during a period when psychologists had turned their attention to quantitative measurement of mental growth, Dennis published an article which highlighted the need to explore the qualitative/cognitive concept of animism. He was especially interested in applying this concept as a differential measure of cross-cultural, experiential, and age-related factors using Piaget's model. A year later Dennis and Russell (1939) developed a standardized procedure for investigating animism based on data from 385 children, ages 3 to $15\frac{1}{2}$ years. Thereafter, he conducted seven major studies on the topic, the first of which (Dennis, 1940) compared animistic thinking between 430 mentally retarded and control subjects according to Piaget's four stages. The results suggested that animistic thinking appears to be a negatively related function of intelligence. The same year Dennis (1940) studied animistic notions of Zuni and Navaho children in order to assess the possibility of cultural differences. Since no detectable differences were found, an autogenic rather than cultural hypothesis

was suggested. However, in a followup study (Dennis, 1943) of older Hopi children, ages 12 to 18, animistic thinking was found to be more prevalent than with white American subjects of the same ages. Whereas Dennis could not identify specific factors related to animistic production in this study, he later posited that differences could be due to the amount of specific information an individual possessed in regards to object realism (Dennis, 1953). This idea was subsequently applied to a cultural analysis (Dennis, 1957), in which 747 Near Eastern adolescents and young adults gave more animistic responses than Americans matched on educational experience. In this study, he suggested that cultural differences may have been a result of the preponderance of scientific information in the American culture.

Dennis' interest in animistic thinking led him into another area of investigation, the process of aging. He first looked at animistic regression as a function of senile deterioration (Dennis, 1948). Fifty subjects, ages 50 to 80, were evaluated to estimate current and previous levels of intellectual functioning. When these results were compared to levels of animistic thinking, it was found that regressive concepts of animistic attribution more closely approximated current intellectual functioning. An expanded study by Dennis and Mallinger (1949) examined 36 senescents who were estimated to have had IQ's

of 100 or greater. Overall, animistic production exceeded those typically given by 12 to 14 year old children. The regression due to neurological deterioration hypothesis was supported. In contrast, Dennis (1954; 1954; 1956; 1958) showed that behavioral output, as measured by scholarly contributions, was maintained at a high rate among long-lived scientists. A particularly interesting finding was that approximately one-half of publications occurred after age 50 among 156 late nineteenth-century scientists.

The fact that Dennis often referred to scientists and the field of science in his publications was not coincidental. When he pointed out that the concept of animism dates back to writings by Tiedemann in 1787 (Dennis, 1938); that early (2500 B.C.) graphics by Egyptians on the tombs at Thebes were right-handed productions (Dennis, 1958); that Desmonceaux's 1775 monograph on infant vision is anecdotal (Dennis, 1937); that imitation occurs because sensory experiences become associated with a response dates back to Hartley in 1749 (Dennis, 1954); and that there were "probably" 13 of the 26 charter members of APA present at the first meeting (Dennis, 1952), he wrote from a remarkably informed base of scientific and psychological information. In all, Dennis published 12 works including 5 books on the field of science in general, and various subfields within

psychology in particular. He continually urged the need for a strong historical and conceptual perspective of psychology as the most basic underpinning for fledgling psychologists. He examined then current attitudes of various professional and lay groups as to the validity of psychology's existence. His foresight in predicting future roles for psychology was exemplified in 1953 when he suggested that psychology would grow within the context of social institutions, with an interdisciplinary stress upon preventive mental hygiene (Dennis, 1953). He edited volumes on current trends in industrial, social, general, professional, and child psychology.

Of all the areas examined by Dennis, he will be remembered most for his innovative work in cross-cultural studies of child development. He used the human figure drawing extensively as a tool for exploring cultural variations. He explored rearing practices, effects of institutionalization, religious influences, and infant behavior and development. During his career, he was instrumental in compiling more data on certain American Indian groups and Near Eastern cultures than any other author. Although he primarily focused upon the Hopi, Pueblo, Zuni, Lebanese, and Egyptian cultures, he also addressed aspects of Turkish, Cambodian, Japanese, Iranian, Sudanese, and Israeli life.

Dennis devoted a considerable proportion of his research to studying the effects of culturally specific rearing practices upon later motor, perceptual, and cognitive performance. Patterns of social and motor behavior were comparable for Hopi Indian and white American infants regardless of the rearing practices; such as, continual cradling, lack of elimination training, extended nursing and minimal social reinforcement by the Hopi parents (Dennis, 1936). Further, social-cultural affiliation interests were similar for six-year-old Hopi and white American children as depicted by the Goodenough Draw-a-man Test, but differentiation did increase with age. Likewise, cognitive competencies did not vary significantly (Dennis, 1936). However, Dennis (1941) replicated, with modification, Spalding's (1873) study on critical periods of newly hatched chicks. Dennis caged two young buzzards, restricting flight movements for 10 weeks. Following this, the buzzards exhibited significant retardation in developing normal flight and perching behaviors which were proficiently displayed by control birds by the tenth week. This frequently cited study stimulated Dennis' thinking as to the effects of deprivation on humans. Sixteen years later, Dennis and Najarian (1957) reported that infants raised in an institution in Beirut, Lebanon, under conditions of "deprived" supervision and interaction with caretakers, showed retardation during the 3 to 12 month period of life. This is in

consideration that perinatal development to age 3 months was essentially undisturbed. The effects appeared to last until the age of $4\frac{1}{2}$ to 6 years. The authors explain the cognitive deficiencies in terms of restricted learning opportunities. A longitudinal follow-up study by Dennis (1973) found that children who had been adopted out of the same crèche between 12 and 24 months of age showed higher cognitive efficiency on intelligence tests at ages 4 through 12 years than those who remained in the institution. These two studies are generally recognized as Dennis' most notable contributions. The latter study was discussed in length in his provocative book, Children of the Crèche.

During his 45 years of professional service to psychology, Dennis produced 130 published works, including 16 books and several contributory overviews. In some ways he could be considered a capricious scientist. While he pursued several topics in depth, often times after long periods of abstinence, he nevertheless followed his own impulses across a liberal sampling of issues. He avoided normative approaches of investigation and pioneered innovative strategies of analysis. He stated, "My inclination is to go directly to the thing that I want to observe and, it seems to me there are so many people who have dealt with the statistics that come from

observations rather than centering on the observations which led to the statistics." (Senn, 1974)

Dr. Dennis died on July 21, 1976, at age 70, as a result of injuries suffered in an automobile accident. His legacy of scientific insight will continue to be a tribute to the field of psychology.

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